

REMARKS

Claims 2, 5-7, 10-11, 18-20, 22, and 29-30 are pending in the application.

Claims 2, 5-7, 10-11, 18-20, and 22 are currently amended, and new independent claims 29 and 30 are added. Applicants respectfully submit that no new matter is added to currently amended claims 2, 5-7, 10-11, 18-20, and 22, and to new claims 29 and 30. Claims 1, 3-4, 8-9, 12-17, 21, and 23-28 are canceled.

Claims 1 and 12 stand rejected under 35 U.S.C. §112, first paragraph.

Claims 1-2, 5-7, 10-12 and 16-20 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent Application Publication No. 2002/0120763 to Miloushev et al., hereinafter, Miloushev, in view of IETF RFC 1094 ("Network File System Protocol Specification", version 20), hereinafter, RFC 1094, and U.S. Patent Application Publication No. 2003/0051055 to Parrella et al., hereinafter, Parrella. Claim 22 stands rejected under 35 U.S.C. §103(a) as unpatentable over Miloushev, RFC 1094 and Parrella, as applied to claim 12 above, and further in view of IETF RFC 791, hereinafter, RFC 791.

Applicants respectfully traverse these rejections based on the following discussion.

I. The 35 U.S.C. §112, First Paragraph, Rejection

[0001] Claims 1 and 12 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the claim element "wherein a data size of said jumbo packet exceeds that of said maximum size supported by said NSF protocol", in claims 1 and 12.

[0002] Applicants have canceled both claims 1 and 12 in the present amendment. As a convenience to the examiner, new independent claims 12 and 30 correspond most closely to Figures 3 and 1 of the Specification.

[0003] Claims 1 and 12 are canceled. Therefore the rejection of claims 1 and 12 under 35 U.S.C. §112, first paragraph, is moot. Withdrawal of the rejection of claim 1 and 12 under 35 U.S.C. §112, first paragraph, is respectfully solicited.

II. The Prior Art Rejections

A. The 35 U.S.C. 103(a) Rejection over Miloushev, RFC 1094, and Parrella

1. The Miloushev Reference

[0004] It is a fact that Miloushev discloses, " An apparatus and method are provided in a computer network to decouple the client from the server, by placing a transparent network node, also termed a file switch or file switch computer, between the client and the server. Usage of such a file switch allows reduced latency in file transfers, as well as scalable mirroring, striping, spillover, and other features." (Abstract).

[0005] It is a fact that Miloushev discloses, "FIG. 1 illustrates an inventive network configuration including a file switch. In this configuration, the file switch 100 is implemented with two different network interfaces: one for connecting to the client network 111 through connection 109, and the other for connecting to a file server network through connections 110, 114 and other similar connections as shown. For simplicity, the file switch is illustrated connected directly to each of the file servers 101 through 107; in practice, one or more commonly available layer 2 switches are preferably used to implement these connections." (paragraph [0124]).

[0006] It is a fact that FIG. 1 of Miloushev discloses,

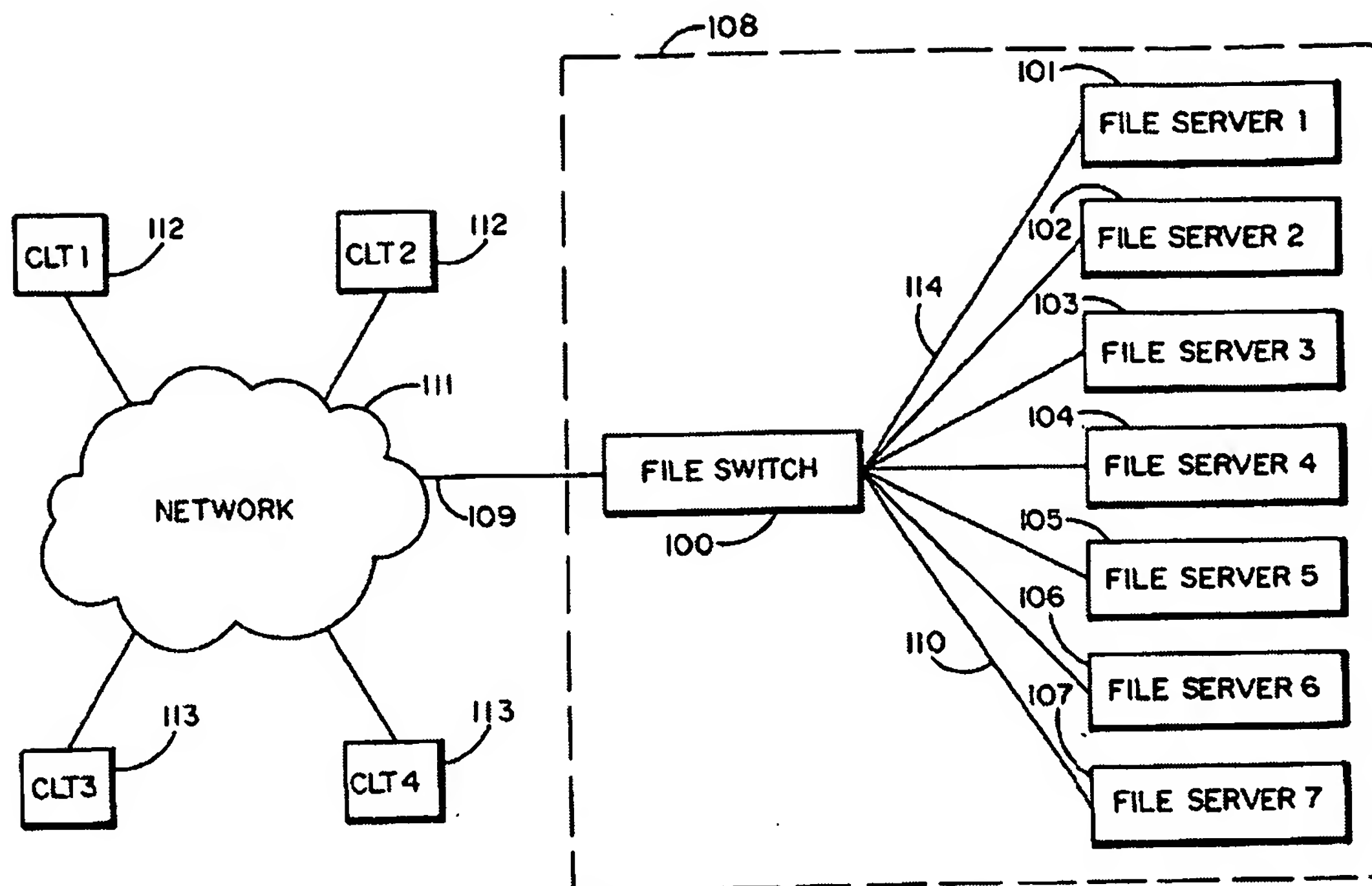


FIG. 1

[0007] It is a fact that Miloushev discloses, "Clients, such as PCs or workstations 112, and application servers 113 request file services by communicating to the file switch 100 using the NFS or CIFS protocols. Switch 100 preferably implements the server side of the appropriate network file protocol on the connection 109. The switch further interacts with the file servers 101 through 107 by implementing the client side of preferably the same network file protocol. The presence of file switch 100 is thereby preferably transparent to both the clients and the servers." (paragraph [0125]).

[0008] It is a fact that Miloushev discloses, "In addition, the following advantageous combinations of features and layouts of the inventive system are provided herein: an architecture including multiple file switches all identified under a single server name within a network; a method and system providing load balancing through a combination of a name resolution mechanism and a group controller mechanism; a method and system providing network function failover through a combination of a name resolution mechanism and a group controller mechanism; a network file system comprising a file switch and a plurality of file servers; a

system, comprising a plurality of file switches and a plurality of file servers, in which the file switches synchronize access to the file servers using only synchronization mechanisms and protocol provided by the file servers; a switched file system in which a switch provides a caching function for either clients or servers; a switched file system in a network in which only commercially available software is required for member clients and servers to function; a switched file system administered as a single file server; a switched file system in which capacity and bandwidth can be scaled independently; a method and system providing opportunistic locking functionality and keeping a file open while maintaining a local copy of the file as cache in a gateway topology." (paragraph [0087]).

[0009] It is a fact that Miloushev discloses, "From the standpoint of a network file client, such as 1506, the switched file system appears as a single file server with multiple network interfaces. FIG. 16 illustrates the similarity between a switched file system and a single file server. Network clients connect to the switched file system 1600 through the interfaces 1602 as they would connect to the single file server 1601 through its interfaces 1603." (paragraph [0353]).

[0010] It is a fact that FIG. 16 of Miloushev discloses,

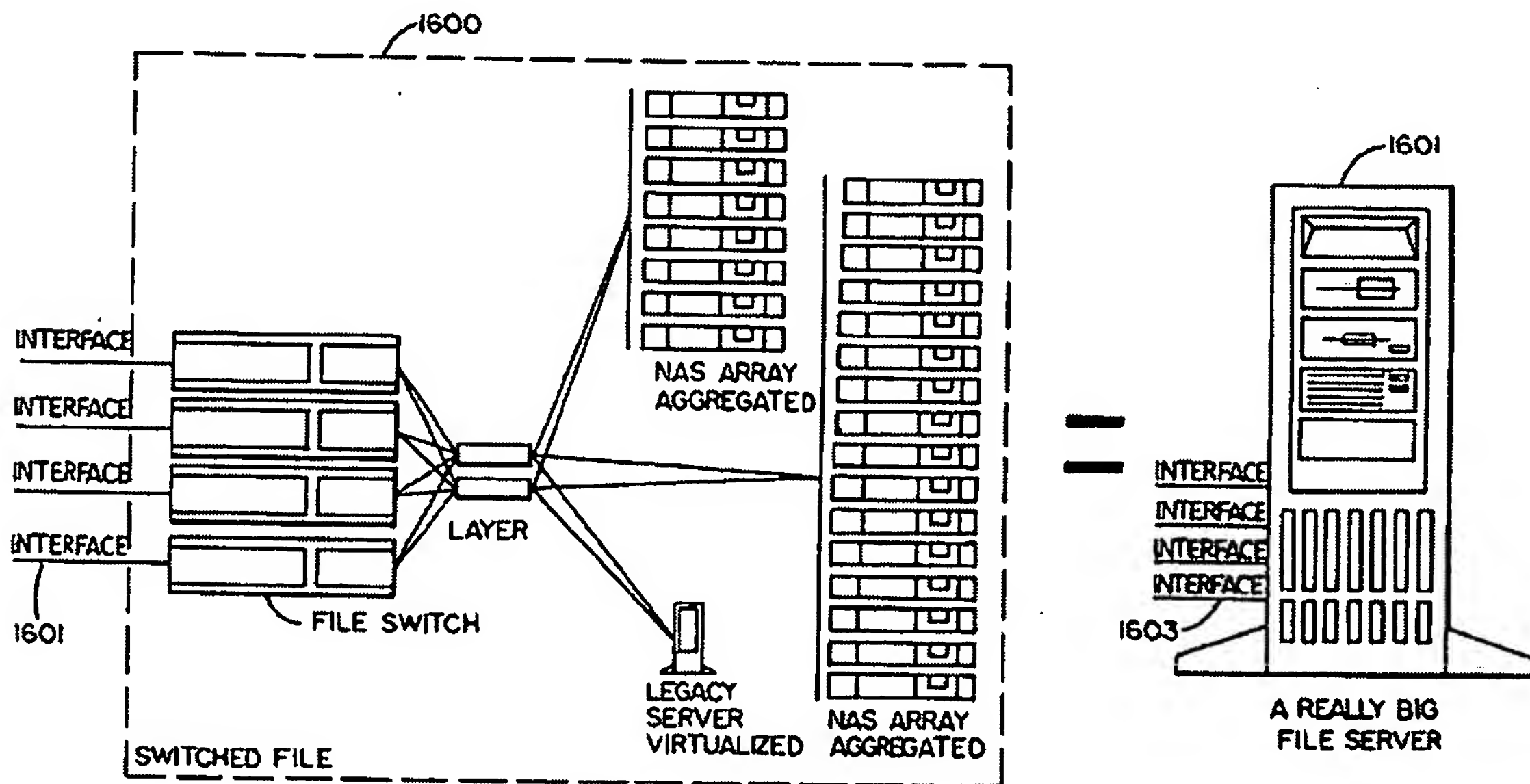


FIG. 16

2. The RFC 1094 Reference

[0011] It is a fact that RFC 1094 discloses a Sun Network Filesystems (NFS) protocol that provides transparent remote access to shared files across networks. The NSF protocol is designed to be portable across different machines, operating systems, network architectures, and transport protocols. This portability is achieved through the use of Remote Procedure Call (RPC) primitives built on top of an eXternal Data Representation (XDR). Implementations already exist for a variety of machines, from personal computers to supercomputers. (1. Introduction).

3. The Parrella Reference

[0012] It is a fact that Parella discloses, "Typical web pages contain a HyperText markup Language (HTML) document, and many embedded images. The conventional behavior for a browser is to fetch the base HTML document, and then, after receipt of the base document, the browser does a second fetch of the many embedded objects, which are typically located on the same web server. Each embedded object, i.e., application data unit, is put into a TCP data unit and each TCP data unit is divided into one or more IP packets. Sending many TCP/IP packets for the many embedded objects rather than, e.g., one large TCP/IP packet, means that the network spends more time than is necessary in sending the control data, in other words, the control data/ to application data/time time ratio is too large. It is more efficient to combine the many embedded objects into one large application data unit and then create one (or at least a minimum number of) large TCP data unit. For the one large TCP data unit the maximum transmission unit (MTU) for the link between this sender super module and the next receiver super module is used for the IP packet(s). (paragraph [0060], lines 1-20).

4. Argument

[0013] Although Miloushev discloses *inter alia* Miloushev discloses an architecture including multiple file switches all identified under a single server name within a network, which may allow load balancing through a combination of a name resolution mechanism and a group controller mechanism, network function failover through a combination of a name resolution

mechanism and a group controller mechanism, and a network file system comprising a file switch and a plurality of file servers, in which the file switches synchronize access to the file servers using only synchronization mechanisms and protocol provided by the file servers, or provide a caching function for either clients or servers (paragraph [0087]), nowhere does Miloushev disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29. That is, although Milosev discloses a single access, i.e., a file switch, to a group of servers that may store information, Miloushev does not use configuration information from the servers accessed to determine which of his servers will process a request. Furthermore, the servers of Miloushev do not construct a response to the client which includes information relating to the process of the request for storage, nor any data to be included in the response.

[0014] For at least the reasons outlined above, Applicants respectfully submit that Miloushev does not disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29.

[0015] RFC 1094 merely discloses a Sun Network Filesystems (NFS) protocol that provides transparent remote access to shared files across networks, in which the NSF protocol is designed to be portable across different machines, operating systems, network architectures, and transport protocols. (1. Introduction).

[0016] Nowhere does RF 1094 disclose, teach or suggest at least the present invention's

features of: " determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29.

[0017] Instead, RFC 1094 merely discloses a Sun Network Filesystems (NFS) protocol that provides transparent remote access to shared files across networks, in which the NSF protocol is designed to be portable across different machines, operating systems, network architectures, and transport protocols. (1. Introduction).

[0018] Parrella merely discloses that it is more efficient to combine many embedded objects into one large application data unit and then to create one (or at least a minimum number of) large TCP data unit. (paragraph [0060], lines 14-17).

[0019] Nowhere does Parella disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29.

[0020] Instead, Parrella merely discloses that it is more efficient to combine many embedded objects into one large application data unit and then to create one (or at least a minimum number of) large TCP data unit. (paragraph [0060], lines 14-17).

[0021] For at least the reasons outlined above, Applicants respectfully submit that Miloushev, RFC 1094 and Parrella, either individually or in combination, disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response

including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29. Accordingly, Miloushev, RFC 1094 and Parrella, either individually or in combination, fail to render obvious the subject matter of new independent claims 29 and 30, and dependent claims 2, 5-7, 10-11, 18-20, 22 under 35 U.S.C. §103(a). The rejection of canceled claims 1, 12, 16, and 17 is moot. Withdrawal of the rejection of claims 1, 2, 5-7, 10-12, 16-20, and 22 under 35 U.S.C. §103(a) as unpatentable over Miloushev, RFC 1094 and Parrella is respectfully solicited.

B. The 35 U.S.C. 103(a) Rejection over Miloushev, RFC 1094, Parrella, and RFC 791

1. The RFC 791 Reference

[0022] It is a fact that RFC 791 discloses, "The Internet Protocol is designed for use in interconnected systems of packet-switched computer communication networks. Such a system has been called a "catenet" [1]. The internet protocol provides for transmitting blocks of data called datagrams from sources to destinations, where sources and destinations are hosts identified by fixed length addresses. The internet protocol also provides for fragmentation and reassembly of long datagrams, if necessary, for transmission through "small packet" networks." (DARPA Internet Program Protocol Specification, 1. Introduction, 1.1 Motivation).

2. Argument

[0023] RFC 791 merely comprises the Internet Protocol. (DARPA Internet Program Protocol Specification, 1. Introduction, 1.1 Motivation).

[0024] Nowhere does RFC 791 disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to

processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29.

[0025] Instead, RFC 791 merely comprises the Internet Protocol. (DARPA Internet Program Protocol Specification, 1. Introduction, 1.1 Motivation).

[0026] For at least the reasons outlined above, Applicants respectfully submit that Miloushev, RFC 1094, Parrella and RFC 791, either individually or in combination, disclose, teach or suggest at least the present invention's features of: "determining, by said virtualizer, which single network attached store of a plurality of network attached stores will process said request for storage based on configuration information relating to said plurality of network attached stores; ... constructing a response by said single network attached store computer, said response including information relating to processing of said request for storage and data to be included in said response", as recited in new independent claim 30, and as similarly recited in new independent claim 29. Accordingly, Miloushev, RFC 1094, Parrella and RFC 791, either individually or in combination, fail to render obvious the subject matter of new independent claims 29 and 30, and dependent claim 22 under 35 U.S.C. §103(a). Withdrawal of the rejection of claim 22 under 35 U.S.C. §103(a) as unpatentable over Miloushev, RFC 1094, Parrella and RF 791 is respectfully solicited.

III. Formal Matters and Conclusion

Claims 2, 5-7, 10-11, 18-20, 22, and 29-30 are pending in the application.

Applicants respectfully submit that the present claims fulfill the statutory requirements of 35 U.S.C. §112, first paragraph.

With respect to the rejections of the claims over the cited prior art, Applicants respectfully argue that the present claims are distinguishable over the prior art of record. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections to the claims.

In view of the foregoing, Applicants submit that claims 2, 5-7, 10-11, 18-20, 22, and 29-30, all the claims presently pending in the application, are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest time possible.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

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